

the position taken by the examiner, the logic employed in arriving at that conclusion is perplexing. The central thrust of the argument appears that none of the applicant's product claims require the connector to be heated. This is a correct statement, and the applicant's attorney wonders why a "process" limitation would be found in a "product" claim. Product claims are designed to cover final products whereas process claims are designed to cover processes. It is recognized that a hybrid "product by process" claim is possible, but the applicant's attorney is not trying to secure coverage for this hybrid type. It would appear that the examiner needs to come forth with logic other than the above in order to properly sustain a restriction requirement.

---

***37 C.F.R. §1.83(a) Objection & Responsive Arguments***

---

The examiner has indicated that the drawings are objected to in that the "inner polymeric liner conforming to the ribbed segment is not shown." Applicant's attorney would respectfully request the examiner to revisit this position in light of the addition made to FIG. 5 which adds the reference number 18 to a partial cut-away portion of the ribbed segment 36 clearly showing the inner polymeric liner conforming to the ribbed segment. The applicant's attorney requests that the examiner approve this change, which is submitted in red.

---

***35 U.S.C. §112 Rejection, first paragraph & Responsive Arguments***

---

No rejections are pending in this application.

---

***35 U.S.C. §112 Rejection, second paragraph & Responsive Arguments***

---

The examiner has rejected claims 1-18 under this section for inclusion of the phrase "essentially" which rendered the claim indefinite. This rejection is believed to have been overcome by the amendment to independent claims, 1, 5, 8, 12 and 16.

---

**35 U.S.C. §102 Rejection & Responsive Arguments**

---

The examiner has rejected claims 1, 8 and 12 under this section as being anticipated by Kurtz, United States Patent 3,399,908. In light of the amendment made to independent claims 1, 8 and 12, this rejection is believed to have been overcome.

Kurtz does not show or teach "contacting engagement" between the inner shelf of the nut and the outer metallic sleeve. Kurtz does show engagement with open coupling members 12, and shelf 18, but this is not the arrangement of the applicant wherein there is direct contacting engagement. Additionally, Kurtz requires metal gaskets 24 to effect sealing engagement. The applicant's arrangement is not analogous and these metal gaskets have been eliminated, as has coupling members 12.

---

**35 U.S.C. §103 Rejection & Responsive Arguments**

---

The examiner has rejected claims 1-18 as unpatentable over Longfellow (United States Patent 3,743,328) in view of Kurtz ('908). In light of the amendments made by the applicant's attorney to the independent claims, this rejection is believed to have been overcome.

First, it is noted that Longfellow does not even show a polymeric-lined copper tube, but rather a two layer tube wherein the two layers are chosen from aluminum, or brass or stainless steel with aluminum being preferred for the inner layer. While the interchangeability of various metals is known, there is no reference that the examiner has identified that teaches the interchangeability of metal and plastic for this application.

Additionally, Longfellow '328 is a "gas" appliance connector, as might be used to hook up a gas oven or a gas dryer. It is used to transfer gases, which is why the tubes are both metallic. The use of a polymer would be inapplicable in this environment in that polymers are permeable to gases, thereby creating the possibility of an explosion due to gas leakage through the polymer. An inventor looking to solve the problem of connecting liquid conduits together, would not likely look into the gas connector field, because the considerations for each field are so vastly different. Because they are non-analogous fields of art, it is unlikely that an inventor would be combining the teachings of Longfellow '328 with those of Kurtz '908.

In point of fact, Longfellow '328 had all of the teachings of Kurtz '908 at his disposal, and expressly chose not to follow them and utilized two metal tubes in his connector. It took almost 30 years from the time that inventors had the teachings of Longfellow and Kurtz to combine them in the manner which the examiner has suggested. The conclusion is that making this link was "unobvious."

---

***Request for Reconsideration***

---

Applicant believes that independent claims 1, 5, 8, 12 and 16 as well as provisionally pending independent claims 19, 21, 23, 26, 29, and 32 clearly define over the prior art and that the distinctions between the present invention and the prior art would not have been obvious to one of ordinary skill in the art. Additionally, the remaining dependent claims depend from and contain all of the limitations of independent claims believed to distinguish over the Prior Art and are patentable by virtue of their dependency. All pending claims are thought to be allowable and reconsideration by the Examiner is respectfully requested.

It is respectfully submitted that no new additional searching will be required by the examiner.

---

***Fee Determination Record***

---

A fee determination sheet is attached for this amendment response. If additional fees are believed to be due at this time, the Commissioner is hereby authorized to charge any additional fee required to effect the filing of this document to Account No. 50-0983.

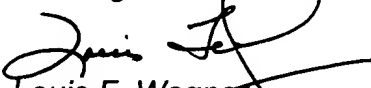
---

**Conclusion**

---

If the examiner believes that a telephonic conversation would facilitate a resolution of any and/or all of the outstanding issues pending in this application, then such a call is cordially invited at the convenience of the examiner.

Respectfully Submitted,  
Buckingham, Doolittle & Burroughs, LLP

  
Louis F. Wagner  
LWagner@bdblawn.com  
Registration No.: 35,730

Buckingham, Doolittle & Burroughs, LLP  
50 S. Main St.  
P.O. Box 1500  
Akron, Ohio 44309-1500  
(330) 258-6453 (telephone)  
(330) 252-5452 (fax)  
Attorney Docket #: 39288.0112



---

**IN THE UNITED STATES PATENT & TRADEMARK OFFICE**

---

<i>Applicant:</i>	Rowley	<i>Examiner:</i>	Nicholson, Erick
<i>Serial #:</i>	09/682,467	<i>Art Unit:</i>	3679
<i>Filing Date:</i>	06 September 2001	<i>Date:</i>	8 May 2003
<i>Title:</i>	Bendable Polymer-Lined Water Heater Connector		

---

**Version with Markings to Show Changes Made**

---

***In the Claims***

---

Please amend the following claims:

1. (amended) A connector for liquids which comprises:
  - (a) an inner polymeric liner having two opposed flared ends and a centrally disposed bore therethrough;
  - (b) a bendable outer metallic sleeve having two opposed flared ends of [essentially] similar geometry to said polymeric liner flared ends; and
  - (c) two outwardly facing threaded nuts, each of said nuts having a shelf which contactingly engages said opposed flared ends of said metallic sleeve.
5. (amended) A connector for liquids which comprises:
  - (a) an inner polymeric liner having two opposed flared ends and a centrally disposed bore therethrough;
  - (b) a bendable outer metallic sleeve having two opposed flared ends of [essentially] similar geometry to said polymeric liner flared ends and a plurality of ribs between said two opposed flared ends of said metallic sleeve; and
  - (c) two outwardly facing threaded nuts, each of said nuts having a shelf which contactingly engages said opposed flared ends of said metallic sleeve.
8. (amended) A connector for liquids which comprises:
  - (a) an inner polymeric liner having at least one flared end and a centrally disposed bore therethrough;
  - (b) a bendable outer metallic sleeve having at least one flared end of [essentially] similar geometry to said at least one polymeric liner flared end; and

- (c) at least one outwardly facing threaded nut, said nut having a shelf which contactingly engages said at least one flared end of said metallic sleeve.

12. (amended) A connector for liquids which comprises:

- (a) an inner polymeric liner having one flared end and an opposed integrally molded sealing end, said liner having a centrally disposed bore therethrough, and wherein said sealing end comprises
  - (i) a radially extending sealing surface from said liner, and
  - (ii) a shoulder which terminates the sealing surface, and wherein said bore of said sealing end is essentially the same as said bore of said liner,
- (b) a bendable outer metallic sleeve having two opposed flared ends of [essentially] similar geometry to each of said polymeric liner flared end and said shoulder of said sealing end; and
- (c) two outwardly facing threaded nuts, each of said nuts having a shelf which contactingly engages said opposed flared ends of said metallic sleeve.

16. (amended) A connector for liquids which comprises:

- (a) an inner polymeric liner having one flared end and an opposed integrally molded sealing end, said liner having a centrally disposed bore therethrough, and wherein said sealing end comprises
  - (i) a radially extending sealing surface from said liner, and
  - (ii) a shoulder which terminates the sealing surface, and wherein said bore of said sealing end is essentially the same as said bore of said liner,
- (b) a bendable outer metallic sleeve having two opposed flared ends of [essentially] similar geometry to each of said polymeric liner flared end and said shoulder of said sealing end and a plurality of ribs between said two opposed flared ends of said metallic sleeve; and
- (c) two outwardly facing threaded nuts, each of said nuts having a shelf which contactingly engages said opposed flared ends of said metallic sleeve.

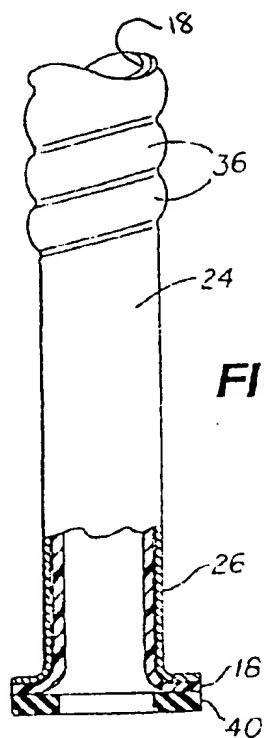


FIG. 5

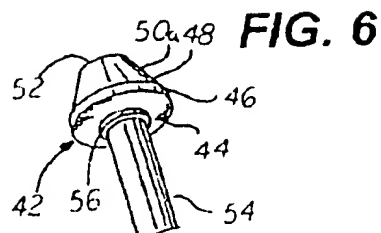


FIG. 6

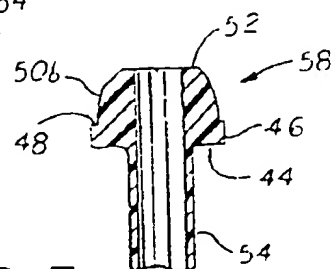


FIG. 7

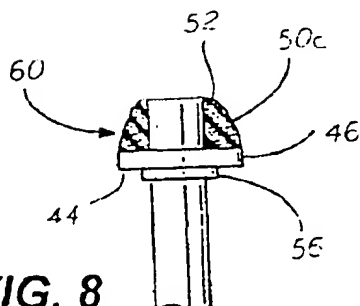


FIG. 8

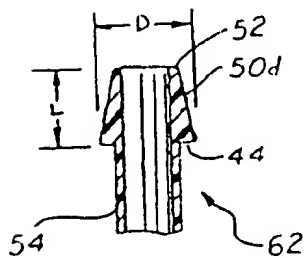


FIG. 9

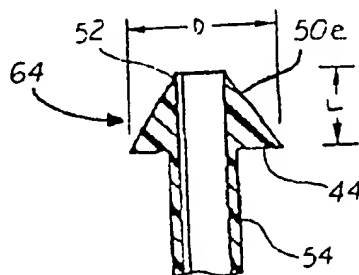


FIG. 10